

Half a century ago, boards were formed and studies commissioned to find a replacement for the .30-cal. cartridges employed in U.S. military service rifles. The goal was to develop a high-velocity, small-caliber cartridge in a lightweight rifle. Eventually, a spin-off of a successful varmint round, the .223 Rem. (5.56x45 mm NATO) cartridge, was selected, and Eugene Stoner's AR-10 rifle was re-engineered, scaled down to accept the .223 and named the AR-15. The selective-fire rifle was adopted

first by the Air Force, and then by the Army and Marine Corps, and dubbed the M16. In the past few years, however, rifles chambered in .308 Win., such as the M14/M1A and AR-10 variants, have been reclaiming their place on the battlefield as special-purpose rifles for designated marksmen.

DPMS Panther Arms has been one of the manufacturers leading the resurgence of AR-10-style rifles with its Long Range 308 line. Now, in response to the need for smaller, faster and lighter carbines, DPMS has released its newest innovation,

the AP4 LR-308. A compact version of the Long Range 308 rifle (April 2004, p. 66), the AP4 LR-308 is, at first glance, a ringer for its little brother, the M4 carbine. But looks can be deceiving.

Much was done to the LR-308 platform in order to trim it down. The milled billet 6061-T6 aluminum lower receiver remained the same, but the extruded 6066-T6 aluminum upper underwent a face-lift. In order to meet the requirements for the Army's Semi-Automatic Sniper System (SASS), DPMS added a brass deflector to the new generation LR-308 and incorporated the now-familiar forward assist into the backside of the brass deflector. Unlike the AR-15/M16A2 design, the AP4 LR-308 forward assist engages the flat surface on the back of the enlarged bolt carrier rather than a series of cuts milled into the side of the carrier.

Inside the LR-308 bolt, the standard single extractor spring was swapped out for a two-spring system in order to enhance reli-



A detachable A2-style rear sight (l.) was supplied on the AP4 LR-308 mounted to the receiver's top Picatinny rail. The bolt and chromed bolt carrier differ in size and design from familiar AR-15 components (lower l.). We installed an optional 308 Miculek Compensator (below) for part of our testing, and it tamed perceived recoil to almost .223-like levels.

ability. Incorporating a standard six-position collapsible stock with the LR-308's longer bolt carrier required a mini buffer that measures 3/4" shorter than a standard carbine buffer.

The AP4 LR-308's barrel is of 4140 chrome-moly steel and sports a standard M4 contour beyond the front-sight assembly. Underneath the handguard, however, the barrel has a heavy profile, measuring nearly an inch in diameter.

The standard AP4 LR-308 handguard is a ribbed aluminum free-float tube, but our test rifle arrived with an optional DPMS four-rail, free-floated handguard. Due to the increased diameter of the barrel extension and the barrel nut, standard AR-15 handguards will not

fit the AP4 LR-308. Also included on our test rifle was a detachable A2-style rear sight, which was attached to the Picatinny rail system on top of the upper receiver.

The fit and finish of our test rifle were exceptional. The take-down pins were remarkably tight, as was the upper-to-lower receiver fit. DPMS' Teflon finish on the hard-coat anodized aluminum was smooth and uniform, as was the chrome plating on the bolt carrier, firing pin and retaining pin.

For accuracy testing, we used a 4-16X variable scope with a fine reticle. We used three different brands of match ammunition from Federal, Hornady and Black Hills. It favored the 168-gr. Hornady AMAX Match loads, producing groups as

small as 0.68" at 100 yds. The AP4, with its 16" barrel, produced an overall average of just smaller than a minute of angle (1.047") with the three brands of ammunition.

Throughout the testing, we used just one 20-round magazine. It was one of the new steel magazines for the LR-308 platform from DPMS, which replaced the company's old plastic 10-round units. Throughout several hundred rounds, the AP4 LR-308 functioned reliably. Of the three malfunctions we experienced, the magazine failed to sufficiently engage the bolt stop twice when it was empty. A single stoppage was a short stroke that prevented a cartridge from being picked up. Upon opening the rifle up, the reason was obvious, the three gas rings on the bolt had aligned.

Looking at the bolt after a hard day on the range presented another surprise. We expected to see a lot of carbon build-up on the back of the bolt, as is usually the case on short-barreled AR-15s, but there really wasn't any on the AP4.

Side-by-side the AP4 LR-308 and the M4 look almost identical, but inside the AP4 LR-308 is a powerhouse. While it's not touted as a sub-m.o.a. rifle, our AP4 had the accuracy to match. 

The *American Rifleman* has used the phrase "Dope Bag" at least since 1921, when Col. Townsend Whelen first titled his column with it. Even then, it had been in use for years, referring to a sack used by target shooters to hold ammunition and accessories on the firing line. "Sight dope" also was a traditional marksman's term for sight adjustment information, while judging wind speed and direction was called "doping the wind."

WARNING: Technical data and information contained herein are intended to provide information based on the limited experience of individuals under specific conditions and circumstances. They do not detail the comprehensive training procedures, techniques and safety precautions absolutely necessary to properly carry on similar activity. Read the notice and disclaimer on the contents page. Always consult comprehensive reference manuals and bulletins for details of proper training requirements, procedures, techniques and safety precautions before attempting any similar activity.

DPMS AP4 LR-308

MANUFACTURER: DPMS PANTHER ARMS (DEPT. AR), 3312 12TH ST., S.E., ST. CLOUD, MN 56304; (320) 258-4448; WWW.DPMSINC.COM

CALIBER: .308 Win.
ACTION: GAS OPERATED, SEMI-AUTOMATIC, CENTER-FIRE RIFLE

RECEIVER: MILLED BILLET-ALUMINUM LOWER, EXTRUDED-ALUMINUM UPPER

BARREL: 16" CHROME-MOLY STEEL

RIFLING: SIX-GROOVE; 1:10" RH TWIST

MAGAZINE: 20-ROUND, DETACHABLE STEEL BOX

SIGHTS: DETACHABLE A2-STYLE REAR; STANDARD A2 FRONT; TOP PICATINNY RAIL

TRIGGER PULL: SINGLE-STAGE; 6 LBS., 4 OZS.

STOCK: SIX-POSITION COLLAPSIBLE SYNTHETIC

OVERALL LENGTH: 38 1/4" TO 34 7/8"

WEIGHT: 8 LBS., 8 OZS.

ACCESSORIES: TWO MAGAZINES, CLEANING KIT, NYLON WEB SLING, OWNER'S MANUAL, OPTIONAL MICULEK .308 COMP (\$65), OPTIONAL FOUR-RAIL HANDGUARD (\$149)

SUGGESTED RETAIL PRICE: \$1,249

SHOOTING RESULTS (100 YDS.)

.308 Win. CARTRIDGE	VEL. @ 10' (F.P.S.)	ENERGY (FT.-LBS.)	GROUP SIZE IN INCHES		
			SMALLEST	LARGEST	AVERAGE
FEDERAL GOLD MEDAL 168-GR. MATCHKING No. GM308M	2479 Avg. 19 Sd	2,292	0.86	1.24	1.03
HORNADY 168-GR. AMAX MATCH No. 8096	2500 Avg. 12 Sd	2,331	0.68	1.29	0.91
BLACK HILLS 168-GR. BTHP	2457 Avg. 26 Sd	2,252	0.69	1.45	1.10
AVERAGE EXTREME SPREAD:					1.01

MEASURED AVERAGE VELOCITY FOR 25 ROUNDS FROM A 16" BARREL. ACCURACY FOR FIVE CONSECUTIVE, FIVE-SHOT GROUPS FROM 100 YDS FROM A TARGET SHOOTING INC. REST. RANGE TEMPERATURE: 66° F. HUMIDITY: 54%. ABBREVIATIONS: Sd (STANDARD DEVIATION), BTHP (BOATTAIL HOLLOW-POINT).



Charles Daly NRA Diamond Grade Over-Unders

Charles Daly has a reputation for offering quality firearms at reasonable prices, but the company also has a steadfast commitment to the Second Amendment. A new four-gun series of 12-ga., over-under shotguns called the "Charles Daly NRA Commemorative Diamond Grade" displays its support symbolically via a black and gold NRA medallion engraved on the underside of each gun's receiver. On the practical end, Charles Daly will donate \$60 from the sale of each shotgun to The NRA Foundation General Endowment, which benefits the future of the shooting sports through hunter safety courses, marksmanship instruction, general firearm education and courses for women and the physically disabled.

The Diamond Grade series consists of four over-under shotguns made by Marocchi, a diversified Italian manufacturer known for its ability to manufacture shotguns and rimfire rifles for just about any price level. The shotguns in this line include the most affordable and aesthetically basic,

the Diamond I, as well as the luxurious Diamond IV. In contrast to the clean surfaces of the Diamond I and IV, the two mid-grade guns, the Diamond II and Diamond III, have extensive roll-marked engraving. The steel receivers of the Diamond IV and III have false sideplates and a silver nitride finish. The blued receiver of the Diamond II and silver nitride receiver Diamond I have the same box-lock action as the Diamond III and Diamond IV, but lack the latter's false sideplates.

All of the guns in the series, including the Diamond III sent to us for evaluation, have inertia triggers whose hammers are driven by coil springs fixed at a shallow angle for a short lock time. The tang-mounted, manual safety button also serves as a barrel selector in the Browning fashion.

Locking with the Daly is by a single Superposed-style underlug that engages a slot in the bottom of the monobloc. A single cocking bar passes down the bottom center of the action body, while the cock-

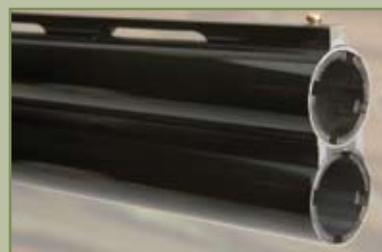
ing bars pass through the action sidewalls. The trunnions can be removed with a hex key, and thus can be replaced as they wear.

The selective ejectors are actuated by trip rods pressing forward on pivoting ejector sears in the fore-end that hold the ejectors back until the barrels are lowered. Shoulders in the front of the action body pivot the sears out of engagement with the ejectors, which are then free to eject the empty shells.

All of the guns in the series have 12-ga., 28" barrels with 3" chambers. No other gauges or barrel lengths are offered. The chrome-lined barrels are topped with a ventilated rib fitted with a brass bead at the front. In contrast, the side ribs are solid. The guns come with five screw-in chokes, and the threads are compatible with Rem-Chokes.

The guns are separated primarily by cosmetic touches. For example, all of the models, except for the Diamond I, have gold triggers, and that of the Diamond IV's is adjustable for length of pull. All have satin-finished, European walnut stocks fitted with a rubber recoil pad whose top is radiused for a smoother mount. All of the stocks are satin-finished, except for that of the blued Diamond II, which is fitted with walnut finished to a high gloss. Sixteen-line-per-

The Daly guns are made by Italy's Marocchi and lock up in Browning Superposed fashion (r.). Five interchangeable choke tubes are supplied with each gun (below).



Charles Daly NRA Diamond Grade III Over-Under



The Diamond III includes a Deely-style fore-end latch (above, l.), and a nitride-finish, boxlock receiver with false sideplates (above). The gun is tastefully ornamented with roll engraving in a scroll motif, and the underside of the receiver bears the NRA medallion (l.).

inch checkering in a bordered point pattern embellishes the wrist of the pistol-grip stock and the fore-end. The Diamond I and Diamond IV have schnabel fore-ends, whereas the Diamond II and Diamond III have beavertails.

The Diamond III was patterned at 40 yds. with Hevi-Steel with the results shown in the accompanying table. It was also function-fired with Federal pheasant loads on a

springer spaniel training session. There were no failures of any kind.

The price range for these guns is \$1,179 to \$1,499, but if you're looking for a deal, order one directly from AcuSport. It'll be shipped to an official Charles Daly retailer, and you'll save more than \$300. That's a bargain, especially considering that you may be saving something else besides money: the future of the shooting sports. 🦅

Charles Daly NRA Diamond III

MANUFACTURER: MAROCCHI DI STEFANO S.P.A., 25068 ZANANO DI SAREZZO, BRESCIA, ITALY

IMPORTER: ACUSPORT CORPORATION, ONE HUNTER PLACE, BELLEFONTAINE, OH, 43311; (800) 543-3150; WWW.ACUSPORT.COM/NRA-KBI.COM

GAUGE: 12 GA., 3"

MECHANISM TYPE: OVER-UNDER SHOTGUN

BARRELS: 28"

CHOKES: INTERCHANGEABLE

TRIGGER PULL: SINGLE, SELECTIVE; 5 LBS., 9 OZS. (UNDER); 5 LBS., 10 OZS. (OVER)

STOCK: EUROPEAN WALNUT; LENGTH OF PULL, 14 1/4"; DROP AT COMB, 1 1/2"; DROP AT HEEL, 2 3/8"

OVERALL LENGTH: 45 1/4"

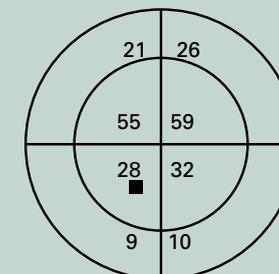
WEIGHT: 8 LBS., 1 OZ.

ACCESSORIES: FIVE INTERCHANGEABLE CHOKES, CHOKES TUBE WRENCH

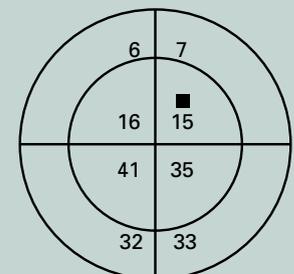
SUGGESTED RETAIL PRICE: \$1,179 TO \$1,499; GRADE III, \$1,369

SHOOTING RESULTS (40 YDS.)

AVERAGE OF 10 PATTERNS



Full Tube



Modified Tube

■ Point of Hold
Hevi-Steel
12 ga., 2 3/4", 1 1/4-oz., No. 6 Steel
Average Pellet Count: 262

TOTAL HITS	240 (91%)	TOTAL HITS	185 (71%)
21" INNER CIRCLE	174 (66%)	21" INNER CIRCLE	107 (41%)
30" OUTER RING	66 (25%)	30" OUTER RING	78 (30%)



Henry Repeating Arms Acu-Bolt .22 LR Rifle

Henry Repeating Arms Co. of Brooklyn, N.Y., is known for its wide range of American-made rimfire and center-fire rifles, including the classic brass-framed "Golden Boy" rimfire lever gun and a version of the semi-automatic AR-7 survival rifle. While much of the company's line has a nostalgic feel, the company's turnbolt offerings—the Henry Mini-Bolt and the Henry Acu-Bolt, reviewed here are decidedly modern.

The Acu-Bolt, introduced in late 2004, is a single-shot rifle featuring a black synthetic stock, a 4¼-lb. weight, and chamberings in .17 Hornady Magnum Rimfire (HMR), .22 LR or .22 Winchester Magnum Rimfire (WMR). The barrel, bolt, receiver and other major components are of stainless steel with a reduced-glare, bead-blasted finish.

The Acu-Bolt's action is borrowed from the company's Mini-Bolt .22. The investment-cast stainless-steel receiver has a square cross-section, with 45-degree flats at the upper edges.

The rifle's bolt features a recessed face, a one-piece, spring-

steel extractor, and an integral handle that, when lifted, travels rearward through a longitudinal slot in the receiver bridge. When the bolt handle is turned down, its root abuts the rear face of the loading/ejection port, allowing it to serve as the action's single locking lug. Additionally, a small spring-loaded detent ball located in the floor of the receiver engages a shallow recess in the bolt body when the bolt is turned down, providing just enough resistance to keep the bolt closed without noticeably stiffening bolt lift.

As in the Mini-Bolt, working the Acu-Bolt's bolt only extracts an empty case or live cartridge and feeds a fresh cartridge into the chamber. Cocking must be done separately by retracting the bolt's knurled cocking knob. Though an admirable safety feature on a youth rifle, it seems a little out of place on an adult gun.

Inside the bolt, a rebounding firing pin, powered by a coil spring, is retained in the cocked position by a vertically sliding sear. This sear, in turn, is engaged by a hook

on the front of a pivoting trigger piece. When the trigger is pulled, its front hook pivots downward, lowering the sear out of engagement with a recess in the firing pin body, allowing the firing pin to fly forward and fire the gun. The sear also functions as a bolt stop.

The rebounding firing pin also serves as the ejector. When the bolt is fully rearward, the firing pin protrudes just enough from the bolt face to kick a spent case out of the receiver if the bolt is retracted smartly. Pulling the bolt back slowly will leave the brass case (or live round) in the action. A small flute at the rear of the loading/ejection port aids ejection.

On the left side of the receiver is a stamped-steel safety, which, when pulled rearward, blocks both the trigger and the bolt. When pushed forward, the safety is disengaged, and the rifle may be fired, as indicated by a small red dot on the left side of the receiver.

The heavy-contour, 20"-long stainless-steel barrel is snugly press-fit into the receiver, and is retained by a cross pin. The



Just like with Henry's Mini-Bolt rimfires, the Acu-Bolt must have its bolt's cocking piece manually retracted for cocking between shots. The one-piece extractor (far l.) is of blued, spring steel. A drift-adjustable-for-windage Williams Fire Sight rear is standard equipment (l.). Made of stainless steel, the receiver (far lower l.) is an investment casting with a square cross section and 45-degree flats at its upper edges. The trigger's direct-pull design made it feel heavier than its 2-lb., 10-oz. weight. On top of the thick-contour stainless barrel is a Williams, red fiber-optic front sight (l.).

barrel is rifled in a six-groove, 1:16" right-hand twist, and its diameter measures 0.685" at the recessed muzzle.

Two sighting options are provided with the rifle. Those who prefer iron sights can use the rifle's Williams Fire Sights, which incorporate two green, fiber-optic units in an elevation-adjustable rear base and a single, red fiber-optic

rod atop a front post, yielding a highly visible three-dot pattern. Windage adjustments are by drifting the rear sight base in its dove-tail slot. For longer shots, or for those who simply prefer a scope, the Acu-Bolt package includes a Weaver-style cantilever scope base and matching rings, as well as a silver-colored 4X scope.

The black synthetic stock

features a pistol grip, a high comb for scope use, generous panels of sharp, molded-in checkering, an integral trigger guard, and a flat-bottomed fore-end equally suited to offhand use or sandbags. Attachment of the stock to the barreled action is by means of a single screw that engages a stud attached to the underside of the barrel.

We fired the Acu-Bolt at the



The Acu-Bolt comes standard with a Weaver-style base as well as a 4X scope. It's a pretty impressive package for \$335.

SHOOTING RESULTS (50 YDS.)

.22 LONG RIFLE CARTRIDGE	VEL. @ 15' (F.P.S.)	ENERGY (FT.-LBS.)	GROUP SIZE IN INCHES		
			SMALLEST	LARGEST	AVERAGE
CCI No. 0031 MINI-MAG 36-Gr. HP	1218 Avg. 26 Sd	118	0.91	1.35	1.14
FEDERAL No. 711 GOLD MEDAL TARGET 40-Gr. LRN	1130 Avg. 19 Sd	113	0.98	1.43	1.22
WOLF MATCH TARGET 40-Gr. LRN	1067 Avg. 25 Sd	101	1.57	2.44	1.89

AVERAGE EXTREME SPREAD:

1.42

MEASURED AVERAGE VELOCITY FOR 10 ROUNDS FROM A 20" BARREL. RANGE TEMPERATURE: 77° F. HUMIDITY: 95%. ACCURACY FOR FIVE CONSECUTIVE, 10-SHOT GROUPS AT 50 YDS. FROM A SANDBAG REST. ABBREVIATIONS: HP (HOLLOW-POINT), LRN (LEAD ROUND-NOSE), SD (STANDARD DEVIATION).

Henry Acu-Bolt

MANUFACTURER: HENRY REPEATING ARMS Co. (DEPT. AR), 110 8TH ST., BROOKLYN, NY 11215; (718) 499-5600, WWW.HENRY-GUNS.COM

CALIBER: .17 HMR, .22 WMR, .22 LR (TESTED)

ACTION TYPE: SINGLE-SHOT, MANUALLY COCKED, BOLT-ACTION RIMFIRE RIFLE

RECEIVER: STAINLESS STEEL

BARREL: 20", HEAVY-CONTOUR

RIFLING: SIX-GROOVE, 1:16" RH TWIST

MAGAZINE: NONE; SINGLE-SHOT

SIGHTS: WILLIAMS FIRE SIGHTS FIBER-OPTIC SIGHTS, THREE-DOT PATTERN; BARREL DRILLED AND TAPPED TO ALLOW MOUNTING OF INCLUDED WEAVER-STYLE BASE, RINGS AND 4X SCOPE

TRIGGER PULL: TWO-STAGE; 2 LBS., 10 OZS.

STOCK: LENGTH OF PULL, 13¼"; DROP AT HEEL, 1¾"; DROP AT COMB, 1½"

OVERALL LENGTH: 36"

WEIGHT: 4 LBS., 4 OZS.

ACCESSORIES: CANTILEVER SCOPE BASE, RINGS, 4X SCOPE, SCOPE COVER, HEX WRENCHES, OWNER'S MANUAL, CATALOG

SUGGESTED RETAIL PRICE: \$335

range off sandbags at 50 yds., using CCI Mini-Mag, Federal Gold Medal Target and Wolf Match Target ammunition. Accuracy and velocity results are included in the accompanying table. There were no malfunctions of any sort.

Surprisingly, the best performance was obtained with the high-velocity CCI Mini-Mag load, which yielded 10-shot groups averaging just over 1" at 50 yds. Clearly the Acu-Bolt has more than enough

accuracy for pest control, general plinking, or varmint hunting at any realistic range.

The gun's action was smooth, and we also liked the downswept bolt handle and comfortable stock design. In fact, the only significant complaint about the gun related to its trigger, whose direct-pull design produced enough creep to make its 2½-lb. pull feel considerably heavier. Also, we thought sling swivel studs would have been

appropriate on a 4¼-lb. rifle that begs to be carried far afield.

Given its all-American heritage, its included scope mounts and 4X optic, and its suggested retail price of \$335, the Henry Acu-Bolt is an excellent value in an accurate, virtually weatherproof, multi-purpose rimfire rifle. Although sized for adults, it would also be an excellent first rifle for a larger child, as well as a gun that could be used by several members of the family. ★



Brownells

AR-15/M16 Magazines

Brownells, a company well known for its gunsmithing tools and factory and after-market firearm components, has recently entered the AR-15/M16 magazine market with new 20- and 30-round offerings.

In development for more than a year, the magazines are the result of a military contract Brownells won to provide U.S. forces with 300,000 of the 30-round magazines.

The Brownells-manufactured magazines feature heavy-duty aluminum bodies that are heat-treated, hard-anodized then coated with a gray-phosphate-colored, dry-lube finish. The finish is designed to pro-

vide lubricity when the magazine is dry. Additionally, Brownells offers a choice of either stainless steel or chrome silicon springs.

The followers are the now-familiar green composite type designed to prevent tipping within the magazine. In the past, standard followers have had a tendency to tip during feeding and cause jams. The green type is claimed to prevent this malfunction through the use of extended "legs" that keep it upright and stable. The follower design is also the reason the Brownells curved 20-round magazine differs from the straight-body 20 rounders of the past.

The new 20- and 30-round Brownells AR-15/M16 magazines feature a green composite follower with extended legs for a claimed increase in stability and reliability.

We received several 20- and 30-round magazines with the chrome silicon springs for testing. They featured evenly applied finishes, and the followers moved freely up and down in the bodies of the magazines.

After loading several magazines to full capacity, we fired rapid-fire strings with the test rifles canted at different angles. Even loaded to their fullest capacity, the sample magazines functioned reliably.

Backed by the Brownells name, these magazines represent a solid value for the AR rifle owner.

Contact: Brownells Inc. (Dept. AR), 200 S. Front St., Montezuma, IA 50171; (800) 741-0015; www.brownells.com. Suggested Retail Price: \$17.95. ★

